

FOCUS

U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy

September 2001

**President says, "Cut Energy."
We Did!**

California Feds and FEMP
ALERT Teams Identify
13 Percent in
Energy Reductions.

See Page 12.

**ALERT
Teams****IN THIS ISSUE**

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... and more!

President Issues Executive Order Targeting Energy-Efficient Use of Power Devices in Federal Facilities

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the National Energy Conservation Policy Act (Public Law 95-619, 92 Stat. 3206, 42 U.S.C. 8252 et seq.), as amended by the Energy Policy Act of 1992 (EPACT) (Public Law 102-486, 106 Stat. 2776), and section 301 of title 3, United States Code, and in order to further encourage energy conservation by the Federal Government, it is hereby ordered as follows:

Section 1. Energy Efficient Standby Power Devices. Each agency, when it purchases commercially available, off-the-shelf products that use external standby power devices, or that contain an internal standby power function, shall purchase products that use no more than one watt in their standby power consuming mode. If such products are not available, agencies shall purchase products with the lowest standby power wattage while in their standby power consuming mode. Agencies shall adhere to these requirements, when life-cycle cost-effective and practicable and where the relevant product's utility and performance are not compromised as a result. By December 31, 2001, and on an annual basis thereafter, the Department of Energy, in consultation with the Department of Defense and the General Services Administration, shall compile a preliminary list of products to be subject to these requirements. The Department of Energy shall finalize the list and may remove products deemed inappropriate for listing.

Sec. 2. Independent Agencies. Independent agencies are encouraged to comply with the provisions of this order.

Sec. 3. Definition. "Agency" means an executive agency as defined in 5 U.S.C. 105. For the purpose of this order, military departments, as defined in 5 U.S.C. 102, are covered by the Department of Defense.



George W. Bush
July 31, 2001

For more on Executive Order 13221, see page 11.

The Director's Column



Beth Shearer
FEMP Director

Secretary of Energy
Spencer Abraham

Assistant Secretary,
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President Bush, through Executive Order 13221, “Energy-Efficient Standby Power Devices,” has directed Federal agencies to purchase products that use limited standby power, and named DOE Secretary Abraham as the Government’s “vampire slayer.” In this edition of the *FEMP Focus*, FEMP reproduces the new Executive Order, explains what energy “vampires” are, and defines EERE’s role in supporting the President’s efforts to address energy waste associated with standby power. So, beware energy vampires!

The rest of this issue highlights the gains that Federal facilities are making through working with FEMP’s private-sector partners—energy service companies (ESCOs) and utility providers. FEMP’s Super Energy Savings Performance Contracts (ESPCs) are making their mark, along with other agencies’ ESPCs and utility energy service contracts (UESCs), as practical and flexible vehicles for accomplishing Federal water and energy efficiency improvements.

If you haven’t considered a financed energy project lately, maybe it’s time to think again. Agencies are making the experience pay off in smart, high-value projects for their facilities. The articles in this issue about Super ESPC trends and the consolidation of the contracts highlight program progress and process improvements that are helping agencies complete energy-saving projects more quickly. Several agency projects are featured in this issue, including a utility-financed geothermal heat pump project that set a new standard for customer service at a U.S. Marine Corps Base, and the first international State Department Super ESPC project.

Finally, I am always interested in knowing if FEMP programs are adding value for our customers. We recently conducted a customer survey and you told us that, indeed, we have helped you succeed at your energy management activities. Initial survey results indicate that participants are highly satisfied with the quality and usefulness of FEMP’s services and plan to continue to use them in the future. Since becoming involved with FEMP’s ESPC programs, more than half of participants are either in the implementation or confirmation stage of a project, a 31 percent increase from previous levels. Seventy-four percent rate their likelihood to continue using FEMP’s ESPC program at 8 or higher (out of a possible 10). It is our privilege to contribute to your success!

We eagerly look forward to hearing from you, so keep your questions and comments on Federal energy and water coming! Please send your remarks to Annie Haskins of FEMP at annie.haskins@ee.doe.gov.

— Beth Shearer
Director, Federal Energy Management Program

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Consolidation Brings Consistency: Super ESPCs Have Come a Long Way!

The consolidation of DOE's six sets of regional Super Energy Savings Performance Contracts (ESPC) and implementation of consistent contracting procedures took many months of compromise and teamwork among the FEMP Project Financing Team at Headquarters, contracting officers, contracting officer representatives, project facilitators, technical team leads, and energy service companies. But, the rewards are great: uniform and articulate contracts, elimination of unnecessary bureaucratic administration and costs associated with variation in the contracts, a clear and more precise FEMP message, and fewer and less costly training workshops. Achieving contract consistency was a major milestone in FEMP's continuing efforts to streamline and improve Super ESPCs.

An ESPC is a Federal and private-sector partnership whereby an energy service company (ESCO) arranges financing to develop and install energy and water conservation and renewable energy projects. The ESCO guarantees that energy improvements will result in a specified level of annual cost savings to the Federal customer. These savings will be sufficient to pay the ESCO for its work over the contract term. Super ESPCs are a broader and simpler version of generic ESPCs, and are designed to increase the number of energy and water savings projects while reducing implementation time. With Super ESPCs, FEMP has completed the Federal Acquisition Regulations Competition in Contracting Act procurement process and awards indefinite-delivery, indefinite-quantity (IDIQ) or "umbrella" contracts to prequalified ESCOs. Agencies can more quickly place and implement energy and water savings projects by issuing delivery orders against the IDIQ contracts with these ESCOs.

The six sets of regional ESPCs were developed, starting in 1997, with awards by the Western region, followed by the Southeast, Central, and Midwest in 1998. The Northeast and Mid-Atlantic regions were awarded in early 1999. Even under the umbrella contracts, having six Super ESPC IDIQ contract formats posed certain challenges: varying schedules, definitions, and formatting of provisions, and different provisions based on different DOE local office requirements, and diverse contracting officer preferences. Customers and ESCOs had to adjust to DOE regional differences, communications were sometimes unclear, and training workshop materials had to be

developed and presented separately by each DOE region. The need for consistency resulted in consolidation of the six sets of contracts into one IDIQ format.

"It was a business decision to consolidate the six Super ESPC IDIQ contracts into one contract format as part of our program/process improvement efforts," said Tatiana Strajnic, Project Financing Team Leader. "We wanted to make all the regions' Super ESPC contractual instruments identical in format to better serve agency clients and minimize contract administration requirements." The effort began in earnest when Contracting Officer Beth Dwyer, of the DOE Golden Field Office, and Doug Dahle, of DOE's National Renewable Energy Laboratory, were assigned as program co-leads in mid-1999. In November of 2000, the Super ESPC contract administration was consolidated at the Golden Field Office. Through months of requesting and receiving comments, holding meetings, and reviewing and revising documents, the last draft was completed and sent to contractors, procurement, and legal representatives in March 2001. By August, 32 contract modifications went out for signature and all 32 have been executed to date.

Agency customers can now benefit from experience and samples of delivery order documents developed at other sites within their agency that used the revised IDIQ documents, without the need for significant change from the format. Procurement officials across the nation receive consistent IDIQ contract interpretations and advice from DOE's Golden Field Office. Agencies will also be able to attend consistent workshops with identical materials from region to region. For FEMP Project Financing, there will be fewer training sessions and associated costs, and better communication among the team members. For Contract Administration, staff will no longer need to manage four different versions of contracts and training materials, pricing schedules, and delivery order request for proposal formats. For the FEMP training teams, they now have a high-quality, articulate, clear contractual instrument, and associated training materials, which together make it easier to market, teach, interpret, support, and execute the Super ESPC program.

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First State Department Super ESPC Delivery Order in South Korea

The State Department awarded the first international Super Energy Savings Performance Contract (ESPC) delivery order in March 2001 for installation of geothermal heat pumps (GHPs) in Seoul, South Korea. The Trane Company, one of the prime contractors under the Technology-Specific GHP Super ESPC, is installing geothermal heating and cooling at the U.S. Embassy Seoul Ambassador's Residence and 157 State Department residences in the U.S. South Post Housing Compound.

The Technology-Specific GHP Super ESPCs were amended last year to broaden their scope to worldwide coverage to accommodate the State Department and U.S. Military organizations overseas who would like to use the contracts to improve their facilities. The Seoul GHP project is the culmination of a strong working relationship between DOE FEMP and the State Department. FEMP Director Beth Shearer commended Larry Silverio and Richard Crowson, project technical leads for the State Department, for their accomplishment. Director Shearer said, "I am very pleased that FEMP was able to respond to the State Department's need—opening the door to financing and technical expertise to make this energy efficiency project happen. The potential for enabling Federal sites around the world to take positive steps toward meeting their energy goals is very exciting."

Replacing the heating and cooling systems at the U.S. Embassy South Post Housing Compound in Seoul was a high priority for the State Department for two reasons. Improving the space conditioning in the residences was one objective, but the prime mover was the deteriorating condition of the equipment that was in place. Impending problems with underground oil storage tanks that supplied the old heating equipment made either major remediation or retirement necessary. Abandoning the tanks in place was the least expensive and the least environmentally disruptive alternative. A life-cycle-cost analysis showed GHPs to be the best long-term value to the Government.

Project investment for installing GHPs in the Ambassador's residence and the 157 housing units, plus a small cost for attic insulation and variable frequency drives to improve system efficiency, totaled about \$5.85 million. The State Department paid \$750,000 of that cost directly to Trane from funds saved from an alternative project that would have been funded at much greater expense through traditional appropriations. Fuel oil cost savings of \$324,000 per year and operations and maintenance cost savings of \$238,000 per year will pay for the remaining investment of \$5.1 million over the next 19 years.

Crowson conveyed the State Department's appreciation for "DOE's active assistance on this ESPC," as well as DOE's advice on technical details and evaluation of Trane's proposal. "The team assembled to assist Federal agencies on Super ESPCs is truly excellent," Crowson said.

For more information, please contact Richard Crowson of the State Department at 703-875-5740 or crowsonrh@state.gov; or Doug Culbreth of DOE Atlanta Regional Office at 919-782-5238 or carson.culbreth@hq.doe.gov.

CONSOLIDATION BRINGS CONSISTENCY: SUPER ESPCS HAVE COME A LONG WAY!
(continued from page 3)

"The FEMP Super ESPC program has come a very long way, particularly in the past 2 years," remarked Dwyer. "All the improvements have been very much a collaboration of very dedicated Federal, field, laboratory, and contractor personnel. This is not a stand-alone program, but a team effort, and I'm proud of our accomplishments. My special thanks to the tech guys. This wouldn't have happened without them."

To download the newly amended Super ESPC contract from FEMP's Web site, go to www.eren.doe.gov/femp/financing/esp.html. For more information, please contact Tatiana Strajnic of FEMP at 202-586-9230 or tatiana.strajnic@ee.doe.gov.

GSA Project Becomes First Multi-State Super ESPC

The General Services Administration's (GSA's) Memphis/Mobile Project became the first multi-state Super Energy Savings Performance Contract (ESPC) that simultaneously upgraded and improved energy and renewable energy conservation in nine buildings in four states: Tennessee, Alabama, Mississippi, and Kentucky. This project is a great example of how dedicated energy service companies (ESCOs) and determined agencies can use Super ESPCs to bundle small sites into one successful project—even where low energy costs will limit energy savings. GSA will work through the Birmingham Property Management Center and Sempra Energy Solutions under the DOE Southeast Super ESPC.

This will be the fourth Super ESPC project awarded by the GSA's Southeast Sunbelt Region and overseen by Tim Wisner, Energy Coordinator for the region. Wisner said, "Performance contracting with guaranteed savings is a complex procurement method, but working with FEMP and the knowledgeable ESCOs they provide has really made it a simplified process with solid results. We have used FEMP technical assistance on all of our Super ESPC projects and will continue to do so in the future."

This project faced some particularly tough challenges, including the geographic dispersion of the properties and the smaller size of many of the buildings. In addition, most of these buildings already had very low energy costs of around \$1 per square foot per year resulting from a combination of low energy usage and the low cost of energy (electricity less than 6 cents per kilowatt hour and gas less than \$0.50 per therm). Despite these obstacles, Sempra Energy Solutions was able to put together a project that will upgrade efficiency in over 1.2 million square feet of GSA buildings and replace aging chillers that have been a continuing problem for GSA. Terry Sharp, Super ESPC project facilitator from Oak Ridge National Laboratory, said "This project illustrates that even when site conditions

and energy costs do not appear favorable for an ESPC project, ESCOs and their customers can find ways of building a successful project that meets customer needs."

Site visits to the properties were conducted between late-June and mid-July 1999. Of the ten properties surveyed, energy conservation measures (ECMs) were identified at nine sites. The ECMs in the project include lighting retrofits, installation of variable frequency drives on pumps and fan motors, controls, and chiller replacements. After the delivery order award, Sempra immediately moved forward on the most time-critical portion of the Super ESPC—chiller replacements at the Clifford Davis Federal Building in Memphis, Tennessee. The remaining

ECMs are being installed simultaneously. Wisner credits the Sempra team for designing and installing excellent solutions for GSA's buildings. Implementation costs are approximately \$1.9 million with projected annual savings of \$200,000. The project will be paid for over a 10-year contract term.

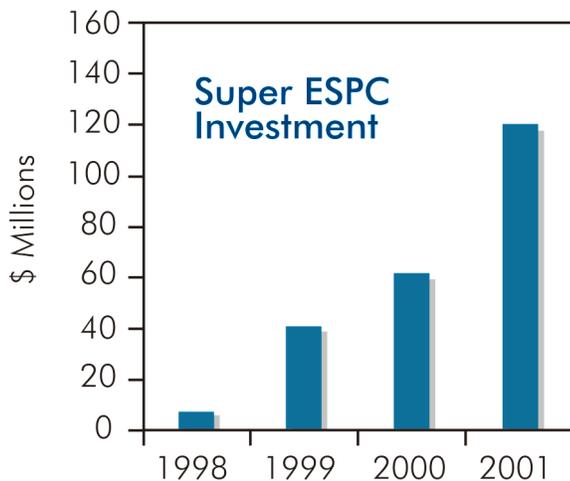
For more information, please contact Terry Sharp of ORNL at 865-574-3559 at sharptr@ornl.org.



The Ed Jones Federal Building in Jackson, Tennessee, is one of nine Federal buildings to benefit from GSA's partnership with Sempra Energy Solutions on the first multi-state Super ESPC.

Progress and Trends: Super ESPCs Deliver Quality Projects

FEMP's regional and technology-specific Super Energy Savings Performance Contracts (ESPC) are making their mark as practical and flexible vehicles for accomplishing Federal water and energy efficiency improvements in Federal facilities. Super ESPC delivery orders worth \$148.5 million have been awarded since project activity began in 1998, as shown in the bar graph below.



Super ESPC investment for 2001 is on track to reach \$120 million.

Continuous Improvement

In 1998 Super ESPCs were virtually unknown in the Federal Government, but now Super ESPCs are well established as a valuable tool for Federal energy managers. Still, FEMP has much to do to educate agency facility managers about the opportunities to obtain financing for their energy projects through Super ESPCs and utility energy service contracts. Fortunately, the experience that FEMP and agencies have gained with alternative financing is providing valuable insight that is both improving the FEMP Project Financing Program and forwarding Super ESPCs as a good business deal for the Government.

Agencies, energy service companies (ESCOs), and FEMP's project facilitators have learned valuable lessons about expediting the Super ESPC process and ensuring that best-value projects are delivered. Along with consolidating Super ESPC contracts (see article on page 3) FEMP has made other improvements:

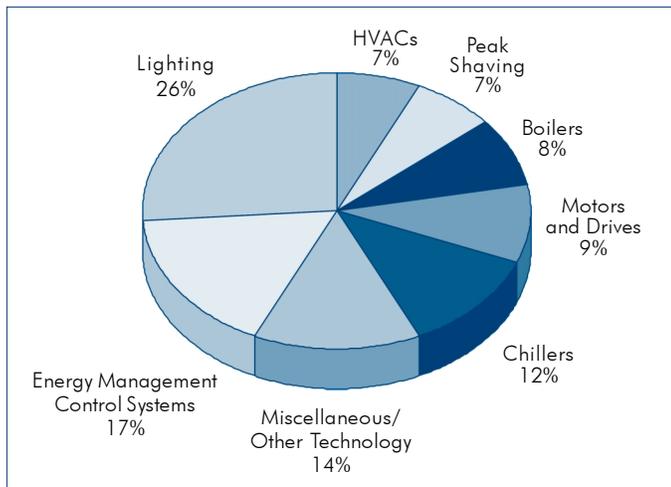
- FEMP project facilitators, who use their expertise with energy technologies, performance contracting, and financing to guide agency customers through developing projects and awarding delivery orders, are helping to expedite the Super ESPC process. The average time between kickoff and award for projects started in 1998 was 17 months, for 1999 projects it was 14 months, and for 2000 projects it was 11 months. Motivated agencies that make their energy projects a priority and work to keep the process on track are awarding delivery orders in as few as 5 months.
- Feedback from customers has indicated that the support and assistance offered by FEMP's project facilitators was already a good value, but it just got better. The "meter" for reimbursing FEMP for its services now starts running only after the agency has seen an initial proposal from the ESCO and decides to proceed with the project. Agencies are also not required to use FEMP's project facilitators after the initial proposal if they would rather not.
- Notification to Congress of delivery order awards, formerly required for projects over \$750,000, is now only required for awards of \$10 million or more.

Good Business Deal

The most obvious advantage of alternative financing is that water and energy conservation projects are possible now without special appropriations from Congress, but agencies are finding that Super ESPCs are a good deal on their other merits as well. The money used to repay the financing would otherwise have been spent on wasted energy and maintenance of obsolete equipment. FEMP's tracking finds that most Super ESPCs are high-value, comprehensive projects providing a wide range of energy facility improvements. Super ESPC statistics show the investment breakdown for Federal facility projects to be (see pie chart):

continued on next page

**PROGRESS AND TRENDS:
SUPER ESPCS DELIVER QUALITY PROJECTS**
(continued from previous page)



Federal facility improvements from Super ESPC investments.

Agencies are also finding that financing costs and measurement and verification (M&V) requirements are not obstacles to structuring technically excellent and financially smart projects. Agencies can choose the M&V options that suit their needs and keep costs reasonably low. Annual M&V costs of Super ESPC projects have averaged 3.86 percent of annual guaranteed cost savings, with half of these projects keeping costs below 2.5 percent.

Financed Projects Can Adapt to Agencies' Needs

Federal energy managers are finding that Super ESPCs, as well as utility energy service contracts, are practical and flexible vehicles for custom-tailoring energy projects to their site-specific needs. Agencies can optimize the value of their projects and pay only for the services they choose by taking advantage of the flexibility in the contracts to fine-tune the guarantee, specify ESCO or utility services, and allocate responsibilities to suit their own in-house resources, capabilities, and priorities. A "responsibility matrix" in the newly amended Super ESPC contracts covering all aspects of the Super ESPC process is in a convenient format for easy reference. Using the matrix to consider financing options and balance corresponding costs and benefits will help agencies build best-value energy projects and meet Federal energy goals.

For more information, please contact Tatiana Strajnic of FEMP at 202-586-9230 or tatiana.strajnic@ee.doe.gov.

Navy Operates Comprehensive Facility Improvement and Infrastructure Upgrade Program

Designed to save both time and money in project planning, contracting, implementation, and operations and maintenance processes, the Navy's facility upgrade and energy services program is highly flexible and can be utilized by any Department of Defense or civilian Department or agency of the Federal Government to perform facility improvements and upgrades on a world-wide basis. The program is operated by the Chesapeake Division, Naval Facilities Engineering Services Center, Washington Navy Yard, Washington, D.C. The heart of the program is a competitively-bid indefinite-delivery, indefinite-quantity, multi-year contract that was awarded to Chevron Energy Solutions.

Federal Government clients outside of the Navy can use the program to accomplish energy services, facility and infrastructure improvement, and upgrade work on a "fee for service" basis. Through Interagency Support Agreements, the Navy will assist in project planning and development and act as contracting officer technical representative and contracting officer or other roles as may be needed by the client. The client, together with the Navy Office, has a large degree of flexibility while still retaining control in developing a total systems solution package that meets their unique requirements.

Financing options, including lease and lease to purchase, are available through this program from Chevron Energy Solutions. Projects can be executed as commercial off the self (COTS) or Military Specification, depending on the project needs.

Additionally, some foreign governments may also take advantage of the program through the Foreign Military Sales Program.

For further information, please contact Joe Nestico of the Naval Facilities Engineering Services Center at 202-433-2208 or nesticoJF@nfesc.navy.mil; or Ed Jones at 240-497-3115 or enjo@chevron.com.

Camp Lejeune Gains Utility-Financed GHPs and Superior Customer Service

At Marine Corps Base Camp Lejeune, “Home of Expeditionary Forces in Readiness,” energy and cost efficiency is important, but never takes precedence over the welfare and morale of the troops. The balancing act required to manage energy and housing at Camp Lejeune makes even more remarkable the success of a utility-financed retrofit of the HVAC systems in 2,089 homes on the Base located near Jacksonville, North Carolina. Carolina Power & Light (CP&L) and its prime contractor Strategic Resource Solutions (SRS) have just completed a project to replace worn-out HVAC equipment with geothermal heat pumps (GHPs) in four family housing areas and upgrade HVAC systems in the homes of four generals. Total project investment was about \$15 million. Camp Lejeune paid \$3 million up front from savings accrued from a CP&L demand-side management program, and \$12 million was financed on a 10-year contract term—an unusually short payback period for a GHP project.

Jim Sides, Camp Lejeune energy manager and champion GHP retrofit of the project, says that preliminary comparisons of energy use before and after the retrofits in a small sample of houses indicate that energy savings are meeting expectations. Base Maintenance Officer Lt. Col. David Nicholson, who oversees utilities on the Base, is happy with the energy savings, which will help meet Camp Lejeune’s energy goals. “Utility financing opened new avenues for the Base,” he said. “Heat pumps aren’t a sexy thing. Put them up against a fighter jet for

funding, and I can tell you what’s going to win. We wouldn’t have been able to do this any other way.”

J.O. (Joe) Parks, who was Director of Housing when the project was first proposed, was unaware of the opportunities for financing Federal energy projects until CP&L’s Military Accounts Manager Bob Dupuis asked, “Would you be interested in installing GHPs if you could use someone else’s money to do it?” The current Director of Housing, Kenneth Day, is delighted to be improving Base housing and living conditions now, without waiting through the typical 5-year programming cycle. “We have all new equipment at virtually no expense to us,” because cost savings will pay for the project, Day said.

Levi Hill, Camp Lejeune’s housing maintenance manager for 21 years, says that most of the replaced HVAC systems were 15 to 20 years old and in serious disrepair. De-superheaters were installed wherever possible to dump the waste heat from the GHPs into the houses’ water heaters. The water heaters are not overloaded any more, Hill says, and with about three-quarters of the new systems installed, his maintenance calls on water heaters and HVAC systems are down 75 to 80 percent.

Camp Lejeune staff stressed that SRS was very proactive and responded to problems quickly and effectively. CP&L and SRS have set a new standard in customer service for contractors working on the Base, according to the Assistant Chief of Staff in charge of facilities, Col. Thomas Phillips.

Bob Reierson, SRS Project Manager, and Dupuis agreed from day one that customer satisfaction would be key to a successful project. They worked methodically with residents to minimize the inevitable disruption of installing the GHPs. SRS informed all residents of the planned work, which consisted of drilling rigs and crews who drilled two vertical bores at each residence and crews who took out the old equipment and installed the new GHPs.



Bob Reierson, SRS Project Manager (left), with satisfied customers, Staff Sgt. Joe D. Solis, Melanie Solis, and their daughter, at their home in Senior Enlisted Officers’ Family Housing at Camp Lejeune.

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Your Alternative Financing Questions Answered

I represent a Federal agency and I will be negotiating a final delivery order. I would like some details on how to conduct the negotiations.

Negotiations of a final delivery order award have both informal and formal aspects. Informal negotiations are ongoing, beginning with the first kickoff meeting and continuing throughout the development of the final proposal, as the energy service company (ESCO) and agency discuss the project details and the agency's needs and preferences. Most of the issues regarding technical matters, such as energy conservation measures (ECM), equipment, and selection of subcontractors, are generally settled in these informal, ongoing communications and are reflected in the proposal text. The agency and ESCO arrive at agreement over any remaining technical and price issues in negotiations led by the agency contracting officer. All agreements must be incorporated into the ESCO's proposal, the Delivery Order Request for Proposal (DO RFP), or both in order to be considered binding.

Once agreements are reached on the three technical components of the proposal—ECMs and energy savings, baseline and measurement and verification plan, and management plan, the ESCO may need to revise some of the aspects of its proposal to clarify the agreement. At this point the detailed energy survey (DES) can be considered as “accepted” and a letter may be sent to the ESCO acknowledging acceptance and requesting the additional pre-award required documents to be furnished. The pricing for the ECMs and service phase costs should generally be considered reasonable. However, final price negotiations may still be on-going at this point.

What is the difference between an initial proposal and a final proposal?

The initial proposal is intended to give the agency enough information to make a confident decision on whether or not to proceed with the project. It is not expected

to reflect a complete understanding of agency and site-specific requirements, and is intended to be prepared at a modest cost to the ESCO.

The final proposal is based on the DES. Detailed DES findings are usually submitted as part of the final proposal that reviews the ECMs considered; their feasibility, rationales for selecting each ECM with detailed backup information, and annual cost savings of each ECM with detailed supporting data. The final proposal content is specified in the indefinite-delivery, indefinite-quantity contract and may be modified as allowed by the DO RFP. Negotiations to achieve agreement on a final delivery order are based on the final proposal and any other post-DES submittals.

Can an electric utility be awarded work involving gas-fired systems, and vice-versa? Who can do water projects?

Bundling saves the Government money. Any serving utility (gas or electric) should be encouraged to include water conservation measures in their assessment/proposals. There are many cases of successful projects with electric companies working on gas systems, and gas companies working on electric systems. The Government should seek the proposal that best meets its needs.

What kind of process should be followed to solicit bids from more than one serving utility? What documentation should be maintained?

It is prudent to conduct an informal competition among the serving utilities giving each the opportunity to present proposals for conservation measures. Document the invitation, responses, and if necessary, the criteria used to select the best proposal in your contract negotiation files.

What questions do you need answering? FEMP wants to provide the most useful information possible, but we need your help to achieve this! Please submit your questions via e-mail to Tatiana Strajnic of FEMP at tatiana.strajnic@ee.doe.gov.

CAMP LEJEUNE GAINS UTILITY-FINANCED GHPs AND SUPERIOR CUSTOMER SERVICE

(continued from page 8)

On the mechanical side of the project, CP&L and SRS also went the extra mile. Wherever thermostats, water heaters, ducting, or other related equipment was faulty or worn out, it was fixed or replaced to make sure the GHPs would work well.

CP&L and SRS back-up their day-to-day customer service with a long-term contract guaranteeing that projected annual savings of about \$1.8 million will be realized.

For more information about Camp Lejeune's GHP project, please contact Jim Sides of Camp Lejeune at 910-451-5642 or sidesjc@lejeune.usmc.mil.

Coming in the Next Issue

Energy Awareness Month Activities/Utility Planning and Management

Including articles on:

- U.S. Air Force Energy Metering Project,
 - U.S. Marine Corps Energy Management Project,
 - Workshops, Trainings, and Conferences,
- ... and more!

GSA and the Smithsonian Team Up with Washington Gas on Chiller/Cogeneration Project

The DOE Headquarters Forrestal Building in Washington, D.C., is beginning to reap the benefits of a privately financed energy efficiency project, and just in the nick of time. In June 2001, just days before the weather in Washington, D.C. started to reach a smoldering heat index temperature of 100 degrees, the first two of eight new 2,200-ton chillers became operational. These two chillers, part of a much larger energy efficiency project, provide cooling for the Forrestal Building.

The chillers were installed in the General Services Administration's (GSA) Central Heating and Refrigeration Plant in Washington, D.C., which is undergoing a much-needed modernization and expansion process that should total about \$64 million when completed. GSA and the Smithsonian Institution signed a Utility Energy Service Contract (UESC) earlier this fiscal year with their utility partner, Washington Gas, which is providing the up-front capital costs of the improved heating and cooling equipment. The new equipment includes a cogeneration system as well as new chillers. Washington Gas acquired capital dollars for the project from a private-sector financial institution, GE Capital Potomac Federal. The Federal Government will repay the utility out of a portion of the energy cost savings resulting from the project.

Anthony Costa, the GSA Assistant Regional Administrator for Buildings, said, "This project is another example of how GSA, in partnership with the private sector, can integrate new technology into our existing infrastructure to make our public buildings more energy efficient and environmentally friendly."

When the project is completed, emissions and operating expenses will be lower, but the plant's capacity to meet chilled-water needs will be greater. GSA's current refrigeration equipment, which uses ozone-depleting refrigerants, will be replaced. The modernized GSA plant will provide chilled water, refrigeration, and air-conditioning for several Federal facilities, including DOE, and eight Smithsonian Institution museums along the National Mall. The Smithsonian Castle, the Hirshhorn Museum, the National Museum of African Art, the National Air and Space Museum, and the National Museum of the American Indian are among the Smithsonian facilities that will receive this enhanced service.

Robert Bailey, Smithsonian Institution Undersecretary for Finance and Administration, said, "This project eliminates the need for the Smithsonian to replace small, aging chiller plants in four of our museums. It also contributes to improved air quality for the region by consolidating energy output at one high-efficiency plant."

A new cogeneration system will produce electricity and steam from natural gas, allowing GSA to meet the steam requirements of more than 100 Federal and local government buildings more efficiently. The system will reduce or eliminate electricity costs while generating surplus electricity for sale to the electric power distribution grid. Using cogeneration technology and natural gas will help to improve air quality in the region by reducing emissions associated with the old system.

GSA called on FEMP for advice on several aspects of the UESC during contract negotiations. Implementation of the project began in February 2001, and it is proceeding smoothly and on schedule. The project should be completed in June 2002—again, just in time for the annual onslaught of heat and humidity in Washington, D.C.

For more information, please contact Chris Potter of GSA at 202-690-9734 or chris.potter@gsa.gov; Bob Carlson of Washington Gas at 703-847-9311, ext. 2 or bcarlson@washgas.com; or Karen Thomas of NREL-FEMP at 202-646-5223 or karen_thomas@nrel.gov.



Smithsonian Institution facilities along the National Mall in Washington, D.C. will receive enhanced energy services from GSA's modernization and expansion of its central heating and refrigeration plant.

Beware of the Energy Vampires!

On July 31, 2001 President Bush issued Executive Order 13221, “Energy-Efficient Standby Power Devices,” directing agencies to buy products that use 1 watt or less in standby mode.

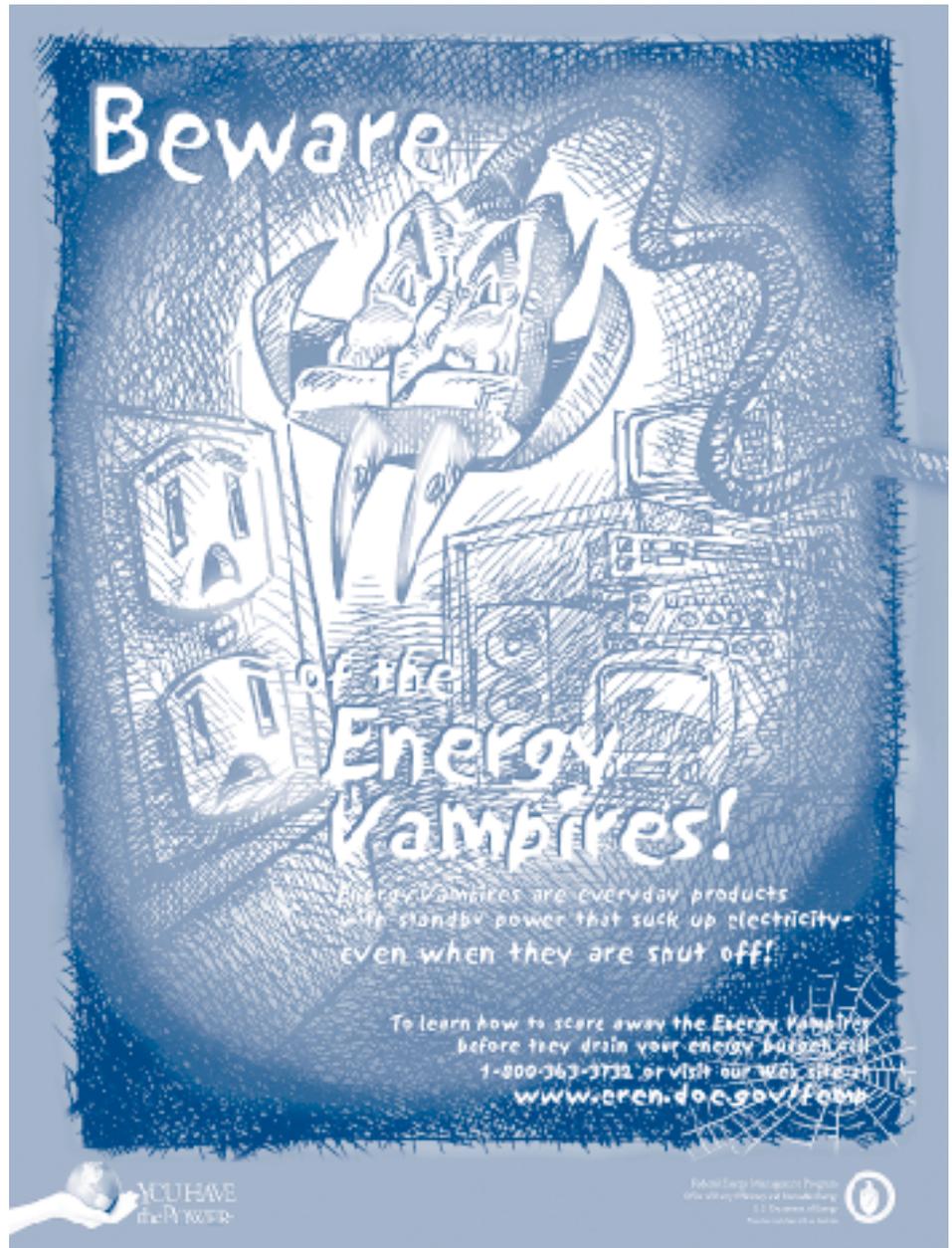
There are a wide range of products purchased every day by Federal agencies that use standby power. Examples include cell phones, telephones, computers and monitors, computer printers, fax machines, microwave ovens, and other appliances (those with electronic controls and keypads or with clock displays), TVs and VCRs, battery-powered tools, and air conditioners (with remote controls).

Electronic equipment and small appliances often consume electricity even when they are not being used. This “standby power” is usually associated with power supplies that are either *external* or *internal* to the product itself.

External devices have earned the name “electricity vampires” because they have two teeth (the prongs of the plug) and suck electricity day and night – they never sleep! The *external* devices, are more familiar to us as the black boxes that plug into wall outlets or power strips, but they represent only about 20 percent of the market, while *internal* power supply, built into the product itself, represents the overwhelming majority (80 percent) of the market.

Both types of power supply can use between 4 and 7 watts of electricity even when the product appears to be “off,”

Available Now



To obtain your color copy of this awareness poster regarding standby power devices, call 1-800-363-EREC or visit www.eren.doe.gov/femp/ordermaterials.html.

although there are many that use less than 1 watt in the “off,” or “standby” mode.

FEMP, in consultation with the Department of Defense, the General Services Administration, and the DOE/EPA ENERGY STAR® program, will create a list of product categories subject

to the 1-watt requirement. If the 1-watt devices are not available, the Executive Order requires agencies to buy devices that are most efficient, available, and cost-effective.

For more information, contact Alison Thomas of FEMP at 202-586-2099 or alison.thomas@ee.doe.gov.

President says, "Cut Energy." We Did!

California Feds and FEMP ALERT Teams Identify 13 Percent in Energy Reductions

On August 30, 2001, FEMP and The Presidio Trust held a workshop about the lessons learned and results of the recent site assessments conducted by FEMP's Assessment of Load and Energy Reduction Techniques (ALERT) Teams. Attendees had an opportunity to hear how ALERT Teams assisted Federal facilities in California to identify an additional 13 percent in reductions in energy consumption and between 5 to 10 percent reduction in demand of the first 13 Federal sites assessed by the ALERT Teams.

ALERT Teams help Federal agencies identify no-cost and low-cost efficiency measures that can be implemented rapidly and perform a limited assessment of distributed generation opportunities and a summary assessment of longer term energy efficiency opportunities.

ALERT Teams are also organized to work with Federal facilities to develop peak load reduction implementation plans and to identify public benefit funds for energy projects.

Six ALERT Teams have been working in California during May, June, and July to assess 25 of California's largest Federal

sites to identify concrete energy-reduction measures that can be implemented rapidly. For a list of the 25 Federal sites in California selected for ALERT Team assistance, see www.eren.doe.gov/femp/resources/dir_alertsites.html.

At the ALERT Workshop, 70 participants were on-site including ALERT Team Members and agency representatives to share their experiences and recommendations. In addition, more than 1,500 viewers have tuned into a Webcast of the workshop. For more information on the ALERT Teams and the workshop, see www.eren.doe.gov/resources/dir_assessment.html.

For more information on the ALERT Teams, please contact Brad Gustafson of FEMP at 202-586-5865 or brad.gustafson@ee.doe.gov; or Cheri Sayer at FEMP's Seattle Regional Office at 206-553-7838.

Federal Government Takes Steps to Conserve Electricity During East Coast Heat Wave

Secretary of Energy Spencer Abraham and Stephen Perry, Head of the

General Services Administration, reported on August 9, 2001 that the Federal Government had implemented a number of measures designed to reduce electricity use in its facilities on the East Coast.

Demand for electricity reached record levels due to the extreme heat and humidity experienced during the week of August 5th from Maine to Virginia. Federal agencies along the East Coast reduced their electrical use in an effort to relieve stress on the electrical grids.

"The Federal Government is doing its part to help conserve electricity during this severe heat wave," said Secretary Abraham.

"We will continue to look for ways to reduce demand on the transmission grid and encourage businesses and individuals to do the same."

"We at GSA are doing everything we can to help reduce the demand throughout the millions of square feet of Federal space we oversee," said GSA Administrator Perry. "Each Federal facility is implementing its Emergency Load Reduction Plan in coordination with its local utility."

FEMP is also planning to make Assessment of Load and Energy Reduction Techniques (ALERT) Teams available in the Mid-Atlantic and Northeast regions to assist Federal agencies in FY 2002.

For more information, please contact Brad Gustafson of FEMP at 202-586-7836 or brad.gustafson@ee.doe.gov.

Postal Service Geothermal Facility Gets Good Marks

While providing significant energy savings, the first geothermal system installed in the State of Nebraska demonstrates that geothermal HVAC equipment can be used to replace boiler/chiller applications without altering indoor facility design. The United States Postal Service (USPS), Northview Carrier Annex, Lincoln, Nebraska, was completed using geothermal equipment in July 1999. This 20,415-square-foot Postal facility provides workroom space to accommodate the carrier operations for North, Central, and West Lincoln, Nebraska for the next 10 years. The facility accommodates 55 routes or carriers, a truck platform with two 30-foot and two 50-foot tractor trailer docks as well as parking for 72 employees, 57 Postal vehicles, and 7 customers.

The following equipment was installed as part of the Northview geothermal HVAC system:

- 72 wells, 200 feet deep with 14,400 feet of ground heat exchangers;
- 2 airhandling units and water-to-air heat pumps with a cooling capacity of approximately 20 tons each;
- a single chilled water unit and a water-to-water heat pump with a cooling capacity of about 10 tons;
- 2 hot water heat pumps and water-to-water heat pumps each supplying 38 gallons per minute of 130 degree water; and,
- 6 fan coil units with total cooling capacity of approximately 6 tons varying in size from 268 to 1,030 cubic feet meters.

The USPS, Kansas City Facilities Service Office, in conjunction with the Lincoln Utility Company, has been monitoring the energy savings of the Northview facility and USPS, Lincoln Cheney Ridge Carrier Annex. The energy usage of both facilities will be monitored for the next 5 years. The Lincoln Cheney Ridge Carrier Annex, also located in Lincoln, Nebraska, was completed in October 1998 and is equipped with a conventional HVAC system. The installation cost of the Cheney facility's conventional HVAC system was approximately \$9 per square feet, while the Northview geothermal system cost approximately \$13.51 per square feet. The difference in construction cost between the conventional HVAC system and the geothermal system was approximately \$90,000. Through the cooperation of Oklahoma Gas & Electric, no additional cost



New geothermal equipment installed at USPS's Northview Carrier Annex in Lincoln, Nebraska, yields significant energy saving at the 20,415-square-foot facility.

was incurred by the Postal Service. Oklahoma Gas and Electric funded this project as a test site and provided the necessary funding, design, equipment, and construction monitoring for the geothermal phase of the Northview project.

The maintenance savings of the Northview geothermal system is projected to be approximately 64 percent less compared to the Cheney facility. The life-cycle payback on investment of the Northview facility is approximately 5 years. The Postmaster has been pleased with the Northview facility and the system has been trouble free.

The first annual report on the energy savings monitoring project in Lincoln, Nebraska, compared the operating costs of the two facilities on a dollar-per-square-foot basis and concluded that the cost savings for the Northview facility was 24 percent or 17 cents-per-square-foot compared to the Cheney facility's operating costs of 71 cents-per-square-foot. Future reports will include HVAC energy use and total building energy use as separate categories. With the growing emphasis on energy conservation, the Kansas City Facilities Service Office hopes to continue to work with utility providers to find creative funding for energy conservation solutions in the future.

For more information, please contact Jack Gustafsson of KCFSO at 913-261-2400 or jgustafsson@email.usps.gov; or Clement Schulze of KCFSO at 913-261-2400 or cschulze@email.usps.gov.

PNNL Scientist Studies Worker Productivity in Energy-Efficient Buildings

Sustainable design is good for the environment, but does it also benefit workers?

At the “Buildings for the 21st Century” lecture series sponsored by the National Building Museum in Washington, D.C. on May 23, 2001, environmental psychologist Judith Heerwagen, Ph.D., of the Pacific Northwest National Laboratory, presented her findings on sustainable design and human ecology. According to Dr. Heerwagen, green buildings can have a significant impact on human sustainability and productivity if design strategies continue to incorporate the features and attributes of preferred natural settings and nature stimuli. The quality of a building, the materials used, indoor air quality, interest-grabbing design features, use of daylighting, and acoustic design, among other factors, impact the productivity of those who work in the building.

The conclusions seem self-evident. Who would want to work in an environment that was dark, unevenly heated, or poorly ventilated? Health is multi-dimensional and includes not only physical factors but also psychological and social well-being. According to Dr. Heerwagen, humans have basic instincts for both “survival needs” and “well-being needs.” Survival needs include environmental health factors such as air, water, and noise levels. Well-being needs include factors that affect both social and psychological health. Such design features include:

- Views to the outdoors for all occupants (not just those on the window wall),
- Informal gathering spaces,
- Natural ventilation,
- Spatial variability instead of long rows of cubicles,
- Daylight in interior spaces to enhance sensory variability, and
- Extensive use of natural materials.

Such features are becoming recognized as important contributors to enhanced performance and to a sense of well-being. The premise behind the inclusion of these features is that the better people feel about their personal health and their work environment, the more productive they will be.

DOE funded a study of the Herman Miller “Green House” manufacturing plant in Holland, Michigan, to assess green building benefits. The building houses a manufacturing plant and an office that also serves as a showroom for the Miller line of office furniture. The energy programs and projects completed over the next 7 years will reduce energy costs at the Herman Miller factory by approximately \$1 million annually. The building’s use of natural gas has been reduced by 7 percent, water/sewer costs have been reduced by 65 percent, and electrical usage has dropped 18 percent when compared to use at the previous facility. Sustainable features of the building include extensive daylighting and operable windows in both the manufacturing plant and office area, and a daylight internal “street” lined with bamboo plants. Native grasses, wood lots, meadow and prairie flowers, ponds, and wetlands replace manicured lawns. The building is an excellent showcase of green building design features that promote physical as well as social well-being including:

- An appealing view of the external environment;



The Herman Miller “Green House” manufacturing plant in Holland, Michigan.

continued on next page

Renewable Electricity Providers Gain Credibility with Green-e

In the wake of the ENERGY STAR® label success, more and more certification labels have been developed to help consumers easily spot environmentally-sound products. ENERGY STAR® was introduced by the Environmental Protection Agency as a voluntary labeling program designed to identify and promote energy-efficient products. Similar to the ENERGY STAR® program, Green-e is a voluntary certification program for renewable electricity. The Green-e Program sets consumer protection and environmental standards for electricity products, and verifies that Green-e certified products meet these standards. Consumers, whether they purchase for the Federal Government or for the home, now have a way to differentiate cleaner, renewable electricity and can be assured that the electricity is independently verified.

Green-e is the first voluntary certification and verification program for renewable electricity products in the United States. Green-e certified products are recognized by the Green-e logo placed on them.

Currently Green-e certified products are available in the following states:

- California,
- Connecticut,
- Delaware,
- Maryland,
- Maine,
- Massachusetts,
- New Jersey,
- New Hampshire,
- Pennsylvania,
- Rhode Island, and
- Vermont.



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PNNL SCIENTIST STUDIES WORKER PRODUCTIVITY IN ENERGY-EFFICIENT BUILDINGS

(continued from page 14)

- Opportunity for regular exercise;
- Opportunity for spontaneous social encounters;
- Opportunity to engage in creativity, self expression, cooperation, and exploration;
- Freedom to move between social phases (from solitude to group interactions);
- Refuge and comfort;
- A sense of belonging and community; and
- Numerous, large windows for distance views, sensory variability, and contact with nature.

What's in store for buildings and workers in the future? Dr. Heerwagen discussed

current trends among large corporations to use multiple small-scale spaces for workers rather than large corporate campuses—and, in some cases, no office building at all. Because many jobs do not necessarily have to be done at the office, changes such as empty offices, technology enablers, and business cost reductions are causing headquarters offices to shrink and spur the use of smaller satellite offices and increase telecommuting. This suggests that buildings will be more diverse in the future and will take on many different functions.

Businesses are experimenting with networks of places that include learning centers, temporary office space that operates more like a movie set than the

traditional office, and virtual teams connected through the Internet with individuals working from home offices. But would the economic and social consequences of this trend outweigh the net gain for building sustainability? Such a trend could have two negative results: the shift of energy costs to workers and the loss of the social and communications infrastructure of the office. Either way, Dr. Heerwagen concluded that we can never expect simple relationships between people and environment because behavior results from the function of both.

For additional information on the human psychology of sustainable design, please contact Judith Heerwagen, Ph.D., of PNNL, at Heerwagenj@battelle.org.

RENEWABLE ELECTRICITY PROVIDERS GAIN CREDIBILITY WITH GREEN-E

(continued from previous page)

Green-e Standards

The Green-e Standard establishes the technical criteria that electricity products must meet to be eligible for Green-e certification. As states become open to retail electricity competition, consumers can take advantage of electric choice by directing their dollars to support “environmentally friendly” electricity, marked with the Green-e logo.

The display of the Green-e logo on an electricity product means that the product has met all of the following requirements:

- 50 percent or more of the electricity supply must come from one or more of the following eligible renewable resources: solar electric, wind, geothermal, biomass, and small or certified low-impact hydro facilities;
- Any non-renewable portion of the product must be as clean or cleaner than the traditional power mix, e.g., air emissions are equal to or lower than those produced by conventional electricity;
- No specific purchases of nuclear power; and
- The Green-e renewable requirement, which is defined as requiring an increasing percentage of new renewable resources from solar, wind, biomass, and geothermal facilities that have come online since 1997, and in New England since 1998.

Electricity Provider Requirements

Green-e certified electricity marketers must pledge to follow the Green-e Code of Conduct, which governs participation in the Green-e Program. Specifically, electricity providers must:

- Make full disclosure of the percentage and type of renewable resources in their electricity product;
- Present product pricing and contract terms in a standardized format, for easy comparison;
- Submit their marketing materials for review twice a year so

Green-e can ensure that they are not making false or misleading claims; and

- Undergo an annual independent Process Audit to verify product content claims and ensure enough renewable power has been purchased to meet customer demand.

Green-e Certification Process

Stakeholders in Ohio and Texas are the most recent states to develop a Green-e standard for certification. They have formed Advisory Committees to reach consensus on issues specific to their region, such as market supply and environmental sensitivities. Advisory Committees can strengthen the Green-e established minimum national threshold but they cannot weaken the threshold. The committees must come to an agreement on such matters as what sources of renewable energy will be eligible, what minimum percentage of renewables each electricity product must contain, and what the new renewable content requirement will be. After committees identify regional issues, subcommittees are formed to research issues and make recommendations to the larger committee. The full Advisory Committee then votes on each issue and sends their recommendations for a regional standard to the Green-e Governing Board.

Green-e is a voluntary initiative. Companies can seek Green-e certification for specific electricity products if they choose to abide by the program’s requirements.

For more information, contact the Green-e info line at 1-888-63-GREEN (1-888-634-7336) or visit the Green-e Web site at www.green-e.org.

INNOVATIVE TECHNOLOGY CORNER

*Brought to you in cooperation with the EERE
Inventions and Innovation Program.*

This new feature of the *FEMP Focus* highlights several new products developed by private companies in cooperation with the DOE Inventions and Innovation Program. EERE's Office of Industrial Technologies has a complete listing of these new technologies on its Web site at www.oit.doe.gov/factsheets/.

Waste Fluid Energy Recovery System

Stop letting your energy dollars go down the drain. It takes a lot of energy to make water hot and 80 to 90 percent of all that valuable energy flows down the drain with wastewater. A new system developed by WaterFilm Energy Inc. provides a low cost, low tech way to recover that lost energy. Called the GFX System, it uses double-walled, vented copper pipes, to capture the energy in wastewater for pre-heating or pre-cooling of water coming into the system. The system works best in applications where the waste and supply lines are in concurrent use. Hot water flowing down the waste pipe releases more than half of its heat energy into the incoming water supply before it reaches the water heater or other appliances. This reduction in energy can equate to approximately 50 percent lower utility costs associated with heating or cooling (i.e., from ice melt) water.

In addition to high efficiency rates, the GFX System's small footprint provides another advantage over traditional systems. The GFX System requires only one-fourth the area to achieve performance similar to conventional, single-walled, non-vented shell and tube heat exchangers. This heat exchanger can continue to operate in many situations where other types of heat exchangers fail.

The GFX System can be installed on nearly any fluid heat transfer system. The system eliminates production bottlenecks caused by running out of hot water and offers low set up and

operating costs. Additionally, the system can triple the capacity of an average electric water heater without increasing tank size. Possible applications include:

- steam condensate lines,
- district heating and cooling systems,
- hotels,
- dormitories,
- hospitals,
- military housing,
- commercial kitchens,
- laundries, or
- ice machines.

For more information about WaterFilm Energy's wastewater heat recovery systems, please contact Dr. Carmine F. Vasile of WaterFilm Energy, Inc. at 631-758-6271 or visit the company's Web site at www.oikos.com/gfx/ or see the OIT fact sheet at www.oit.doe.gov/factsheets/inventions/pdfs/FS26746final.pdf.

Reflective Aluminum Chips

Does your facility still have black asphalt roofing? Black or dark pigmented roofs increase heat absorption and increase the need for air conditioning inside. The highly reflective aluminum chip coatings developed by Transmet Corporation provide an inexpensive way to reduce roof heat absorption and the associated air conditioning load. The building industry's traditional method of addressing roof heat absorption was to mix gravel aggregate into asphalt roofing material and spray reflective pigment onto the roof. Reflective aluminum chips provide a lighter and more cost-effective solution. The application process involves applying an asphalt flood coat to the roof and air-spraying the chips onto the roof while the asphalt is still tacky. The chips are so light and cost effective that they are ideal for large roofs or family housing complexes. Applying the chips to a 10,000 square foot roof can save the equivalent of 82 million Btu each year. Applying reflective aluminum chip coatings to an existing roof also can extend the roof's service life and reduce maintenance and re-roofing costs. The loss in winter heat gain is usually significantly outweighed by the avoided air-conditioning load.

For more information about Transmet Corporation's reflective roofing products, please contact Richard G. Ollila of Transmet Corporation at 614-276-5522 or transmet@worldnet.att.net or visit www.transmet.com. See the OIT fact sheet at www.oit.doe.gov/aluminum/alumfacts/alchips13.shtml.

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FEMP Advanced Lighting Workshop

FEMP Lights has been offering a highly successful electronic distance learning course for the past four years. Last year, the FEMP Lights curriculum was expanded to include the *Advanced Lighting Workshop*, a small, hands-on, three day workshop. This workshop is designed to help Federal energy managers achieve both energy savings and improved lighting quality in their buildings.

The FEMP *Advanced Lighting Workshop* is taught by Nancy Clanton, PE, LC, a nationally-recognized lighting designer and expert in lighting efficiency. The course includes a variety of lecture presentations, class discussions, and group projects. Students bring in their current lighting projects, challenges, and concerns for class review and discussion, and also benefit by working with their counterparts from other agencies doing similar work.

FEMP is again offering the *Advanced Lighting Workshop* in Washington, D.C. this November. Once again, Ms. Clanton will be ready to share her knowledge and infectious enthusiasm of advanced lighting topics and issues. The workshop will be held November 7-9, 2001. To qualify for the course, you must be a current Federal employee or contractor, and have completed the FEMP Lights Web Course (1998-2001), the Federal Relighting Initiative Workshop (1992-1997), or submit your qualifications to the instructor.

For more information on the *Advanced Lighting Workshop*, please visit www.femplights.com or contact Cynthia Austin at austin@h-m-g.com or 916-962-7001.

INNOVATIVE TECHNOLOGY CORNER (continued from page 17)

Advanced Gas Turbine System Technologies for Power Generation

With increasing concern about the reliability of the electric supply system and drastic increases in energy costs, many Federal energy managers are considering distributed generation and combined heat and power systems. Solar Turbines Incorporated's Solar Mercury™ 50 provides a highly efficient, environmentally sound single shaft recuperated power generation turbine with a maximum capacity of 4.3 megawatts. Developed with an emphasis on operational reliability and system availability, the Mercury™ 50 is particularly well suited for facility power and heat process needs as well as providing backup to traditional utility generation resources serving mission critical loads. The Mercury™ 50 utilizes a flexible combustion system which can be configured for ultra-clean pre-mixed or catalytic combustion. When the system is fired with natural gas there is usually no need for add-on pollution control devices. The Mercury™ 50 is also capable of operation on a wide variety of fuels including biomass gas and gasified coal.

The Solar Mercury™ 50 was developed with assistance from the DOE Industrial Power Generation (IPG) Program. The IPG Program is a joint effort between the DOE Office of Energy Efficiency and Renewable Energy and the Office of Fossil Energy's Federal Energy Technology Center.

For more information about the Solar Mercury™ 50, please contact Stephen Gates, Jr. of Solar Turbines Incorporated at 619-595-7463 or steve_gates@cat.e-mail.com or see the IPG fact sheet at www.oit.doe.gov/factsheets/cogen/pdfs/mercury.pdf.

Public Service Company of New Mexico to Host Utility Workshop In October

On October 30-31, 2001, Public Service Company of New Mexico (PNM) will host a workshop in Albuquerque, New Mexico, for Federal customers on utility energy services contracting. Sponsored by FEMP, GSA, and PNM, this workshop will provide attendees with an overview of the contracting options and services available from their local utility companies to

engineer, finance, and install cost effective energy and water savings projects. Participants will learn about the typical project process, from the audit phase to commissioning the equipment. Upon completing this workshop, participants will have the contracting and technical knowledge to begin a project at their facility. This innovative alternative financing opportunity provides a

mechanism to help solve facility problems and meet program objectives and goals. Priority will be given to Federal personnel; however, State and local government customers are welcome.

The registration fee is waived for this workshop. Space is limited, so register by calling FEMP's Workshop Hotline at 703-243-8343 by October 19, 2001.

Plan Now for FEMP Super ESPC Delivery Order Workshops

FEMP is offering Super ESPC delivery order workshops for agencies with potential energy and water savings projects. Agencies will have an opportunity to learn how to issue delivery orders against a DOE indefinite-delivery, indefinite-quantity contract. The course includes an overview of the Super ESPC contract, review of delivery order requirements, frequently asked questions about the contracting process, and evaluation of proposals. This workshop is free of charge to Federal employees involved in energy management, engineering, and procurement. To take full advantage of the information presented, invite your procurement and technical specialists.

To register, call the FEMP Workshop Hotline at 703-243-8343.

2001 Super ESPC Workshop Schedule

Region	Dates	Location
Southeast	October 22-23, 2001 (in conjunction with WEEC)	Atlanta, GA
Central	November 14-15, 2001	Golden, CO

2002 Super ESPC Workshop Schedule

Region	Dates	Location
West	February 5-6, 2002	San Diego, CA
Mid Atlantic	March 5-6, 2002	Washington, D.C.
Northeast	May 14-15, 2002	Boston, MA
Midwest	July 16-17, 2002	Chicago, IL

Be Sure to Watch Building Energy Standards Broadcast

The DOE Building Standards and Guidelines Program (BSGP), in partnership with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Illuminating Engineering Society of North America (IESNA) will present an overview of Standard 90.1-1999 *Energy Standard for Buildings Except Low-Rise Residential Buildings*. The satellite broadcast will take place October 30, 2001 at 12 - 4:15 p.m. (Eastern). If you design, build, own, operate, or regulate commercial buildings then you must see these broadcasts on the newest energy standard, ASHRAE/IESNA Standard 90.1-1999.

Last year's overview broadcast was very successful and had more than 2,000 registered viewers. The number one comment received on the broadcast evaluation forms was a request for more details and a separate broadcast for each topic area. You asked for it...you got it! This year, three, 75-minute broadcasts will air consecutively (separated by 15-minute intermissions) and will cover requirements for building envelope, mechanical, and lighting energy systems.

If you would like to host a downlink site, please register at www.eren.doe.gov/buildings/codes_standards/buildings/broadcast_01.html. Prospective downlink sites should note that the broadcast will only be available in Ku-Analog, so please confirm sites are able to receive Ku-Analog before registering.

Downlink site hosts are asked to support the broadcast in the following ways: 1) market the broadcast to interested parties; 2) offer your facility to viewers including a phone to allow questions to be phoned in during the broadcast; and 3) submit an attendee sign-in sheet and evaluation forms (to be provided to each host site prior to the broadcast) to BSGP following the broadcast.

For more information about the broadcast or to see a list of registered sites as it becomes available visit www.eren.doe.gov/buildings/codes_standards/buildings/broadcast_01.html.

Labs21 Conference Arrives in Our Nation's Capital



The Laboratories for the 21st Century (Labs21) 2001 Annual Conference is scheduled for October 2-4, 2001 in Washington, D.C., at the Hotel Washington. The conference will provide a forum for private and public sector laboratory designers, engineers, owners, and operators to discuss topics related to low-energy, high-performance laboratories. Labs21, sponsored by EPA and DOE, is a voluntary initiative dedicated to improving laboratory energy and water efficiency, encouraging the use of renewable energy sources, and promoting environmental stewardship in U.S. laboratories.

With a focus on the comprehensive, “whole buildings” approach advocated by Labs21, conference participants will share past experiences and develop new solutions to reduce costs and improve laboratory performance. Laboratory experts from around the world will present the latest developments in sustainable and low-energy laboratory design, on-site power strategies, and renewable energy applications. In addition, participants will learn about the achievements of the Labs21 Pilot Partnership Program.

Both plenary and panel sessions of the conference will highlight successful strategies and technologies for improving energy efficiency and environmental performance of laboratories. The conference will include discussion on the following topics:

- Risk management in the operations and maintenance of labs,
- Energy recovery,
- Benchmarking,
- Green laboratory design and retrofits,
- On-site and alternative energy sources,
- Laboratory controls and automation,
- Exhaust and ventilation,
- Commissioning,
- Future views, and
- Case studies.

In a new addition to this year's agenda, the conference will also feature a series of industry-specific roundtables. The purpose of these sessions is to bring together diverse groups of laboratory

professionals from a variety of industries for a focused discussion on the unique challenges/opportunities they face in creating laboratories for the 21st century. The industries include teaching laboratories, computers and electronics, and healthcare products/pharmaceuticals.

The 2001 conference will also feature several specialty workshops in addition to the main conference schedule:

High-Performance, Low-Energy Design Course: Monday, October 1

This one-day course will provide a comprehensive understanding of the opportunities to optimize the energy performance of new and existing laboratories. The course will be taught October 1, 2001 by seasoned laboratory designers, energy managers, and facilities professionals. Participants are expected to have some understanding of laboratory design issues.

As part of the workshop, each participant will receive detailed course materials. In addition, attendees will receive an electronic copy of “A Design Guide for Energy-Efficient Research Laboratories,” a laboratory design tool developed by the Lawrence Berkeley National Laboratory.

Tuition for the course is an additional \$95 and participants can register in conjunction with the full Labs21 Conference. Space is limited, so early registration is encouraged.

International Perspectives: Friday, October 5

In conjunction with the conference, Labs21 is also hosting a workshop for representatives from other nations on October 5, 2001. This session will focus on promoting the Labs21 approach outside the United States and will also allow participants to share their experiences, challenges, and success stories.

For more information on the conference and workshops including on-line registration, please visit www.epa.gov/labs21century or contact Labs21 Conference Registration at 781-674-7374.

Honoring Federal Energy Achievements During Energy Awareness Month

In October, Energy Awareness Month, three awards programs will be held to recognize Federal employees for their efforts on behalf of energy and water conservation efforts at their facilities. The Federal Energy Management Program (FEMP) recognizes outstanding contributions in the areas of energy efficiency, renewable energy, water conservation, and cost-beneficial landscaping. Awards are given to individuals, small groups, and entire agencies.

This year, the Department of Energy celebrates 22 years of energy efficiency recognition through its annual Departmental Energy Management Awards Ceremony. The awards ceremony was established in 1979 by the In-House Energy Management Program of the Department, which is part of FEMP under the Assistant Secretary for Energy Efficiency and Renewable Energy. Each year, these awards are presented to DOE personnel in recognition of their outstanding contributions toward energy and dollar savings at DOE facilities and field organizations. The Departmental Awards will be held on October 16, 2001 in the DOE Headquarters Forrestal Auditorium. DOE personnel are encouraged to attend and honor their colleagues. *For more information regarding the Departmental Awards, please contact Danette Delmastro of FEMP at danette.delmastro@ee.doe.gov.*

Nominations for Federal Awards were received by FEMP in May 2001, and evaluations took place in June. The Federal Energy and Water Management Awards will be presented at a formal ceremony to honor 43 individuals, small groups, and organizations from 12 agencies. The Awards luncheon ceremony will be held on October 17, 2001, in Washington, D.C. A reception to honor award winners will be held on the evening of Tuesday, October 16. Both events are by invitation only. *For more information regarding the Federal Energy and Water Management Awards, please call the awards hotline at 1-800-353-5342 or contact Nellie Greer of FEMP at nellie.tibbs-greer@ee.doe.gov.*

The Presidential Awards for Leadership in Federal Energy Management honor employees from multiple Federal agencies for their support, leadership, and efforts in promoting and improving Federal energy management. This awards program is in its second year and is required by Executive Order 13123, *Greening the Government through Efficient Energy Management*.

The Presidential Awards will be held on Thursday, October 18, 2001. The ceremony and a reception will take place in Washington, D.C. Award winners will also be given a special tour of the White House. These events are by invitation only. *For more information regarding the Presidential Awards, please contact Annie Haskins of FEMP at annie.haskins@ee.doe.gov.*

Energy Awareness Month Poster

To obtain your color copy of this energy awareness month poster, call 1-800-363-EREC or visit www.eren.doe.gov/femp/ordermaterials.html.



FEMP Training Reminders

FEMP Lights Web-Course (self-paced)

Registration September 24-October 26
www.femplights.com
425-640-1390

High Performance, Low Energy Laboratory Design Workshop

in conjunction with
Laboratories for the 21st Century
October 1
Washington, D.C.
www.epa.gov/labs21century/training/index.htm
816-531-SAVE (7283)

AEE M&V Fundamentals Seminar

October 11-12
Phoenix, AZ
www.aeecenter.org/seminars
800-528-8282

FEMP Super ESPC

in conjunction with
World Energy Engineering Congress
October 22-23
Atlanta, GA
703-243-8343

UESC Workshop

October 30-31
Albuquerque, NM
703-243-8343

FEMP Advanced Lighting Workshop

November 7-9
Washington, D.C.
www.femplights.com
916-962-7001

FEMP Super ESPC

November 14-15
Golden, CO
703-243-8343

AEE M&V Fundamentals Seminar

November 27-28
Lake Buena Vista, FL
www.aeecenter.org/seminars
407-934-4000

Designing Low-Energy, Sustainable Buildings

November 27-28
Irwindale, CA
202-628-7400

Upcoming Events

Upcoming Conferences

Midwest Electrical Conference & Expo

October 2-3
Indianapolis, IN
www.electricleagueindiana.org

Laboratories for the 21st Century Conference

October 2-4
Washington, D.C.
www.epa.gov/labs21century/

Energy & Environmental Technologies Conference

October 16-17
Atlanta, GA
info@eetech.org

Powercosm 2001

October 22-24
San Francisco, CA
www.gilder.com/powercosm_forms/Conference.asp
413-644-2100

World Energy Engineering Congress

October 24-26
Atlanta, GA
www.aeecenter.org

Business Energy Solutions

November 28-29
Orlando, FL
www.aeecenter.org/
770-925-9633

Interactive Energy 2001

December 5-7
Houston, TX
www.interactiveenergy.com

MTEE 2001

December 7-8
Irvine, CA
www.iceee.org
714-898-8416



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If you are making projects happen at your Federal facility, FEMP would like to hear from you. Please submit project descriptions to Annie Haskins at the address listed below. You will be contacted for additional information if your project is selected to be featured in a future edition of the *FEMP Focus*.

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